

CLAIM AMENDMENTS

Claims 1 to 28 (cancelled).

1           29. (new) A process for deformation of an element by the  
2 application of con rolled pressure on said element or for coupling  
3 a thermoplastic material and fibers of a composite of co-mixed  
4 fibers which comprises one of the steps of:

5           (a) applying pressure to said element through compression  
6 means sensitive to the variation of the chemical-physical  
7 characteristics of said element when it is subjected to a  
8 predetermined temperature; and

9           (b) applying a calibrated pressure onto the composite  
10 with compression means sensitive to the variation of the  
11 chemical-physical characteristics of said thermoplastic material  
12 when it is subjected to a predetermined temperature.

1           30. (new) The process defined in claim 29 wherein said  
2 compression means is made from a heat-shrinking product.

1           31. (new) The process defined in claim 29 wherein said  
2 compression means is made from a tensoelastic product.

1           32. (new) The process defined in claim 29 wherein said  
2 element is made from thermoplastic material.

1           33. (new) The process defined in claim 32 wherein said  
2 element is made from thermoplastic composite material.

1           34. (new) The process defined in claim 33 wherein said  
2 thermoplastic composite material comprises at least one substance  
3 selected from glass, carbon, Kevlar, natural or metal fibers and  
4 mixtures thereof.

1           35. (new) The process defined in claim 33 wherein said  
2 thermoplastic composite material is made with a thermosetting  
3 composite material before a polymerization step.

1           36. (new) A deformation process as defined in claim 29  
2 for an element through the application or calibrated pressure on  
3 it, wherein said element is made from thermoplastic material and in  
4 that said pressure is realized through compression means arranged  
5 on an outer surface of a zone of the element that one wishes to  
6 deform and suitable for applying said pressure when said composite  
7 element is taken to a temperature at which its chemical-physical

8 characteristics change and it reaches a predetermined degree of  
9 malleability.

1 37. (new) A process as defined in claim 29 for realizing  
2 an element on a mold, characterized in that said element is made  
3 from thermoplastic material that can be applied to the mold and on  
4 which calibrated pressure is applied through compression means  
5 suitable for applying said pressure when said thermoplastic  
6 composite element is taken to a temperature at which its  
7 chemical-physical characteristics change and it reaches a  
8 predetermined degree of malleability.

1 38. (new) A coupling process as defined in claim 29  
2 between a thermoplastic material and fibers of a composite of  
3 co-mixed fiber, wherein a calibrated pressure is applied onto the  
4 composite realized through compression means arranged on the outer  
5 surface of said composite of co-mixed fiber and suitable for  
6 applying said pressure when said thermoplastic material is taken to  
7 a temperature which its chemical-physical characteristics change in  
8 such a way as to determine the impregnation thereof with said  
9 fibers .

1                   39. (new) A deformation process of an element defined  
2   in claim 29 wherein said element has a core inside of it to  
3   configure it with a shape matching said core.

1                   40. (new) The deformation process defined in claim 39  
2   wherein said core is removable.

1                   41. (new) The deformation process defined in claim 39  
2   wherein said core is wooden and is integrally connected to said  
3   element.

1                   42. (new) The deformation process defined in claim 39  
2   wherein said core is made from plastic and is fixedly connected to  
3   said element through a chemical link due to the compatibility of  
4   plastic with the resin matrix of the composite.

1                   43. (new) The deformation process defined in claim 29  
2   wherein said core is an integral part of another element such as a  
3   tool or connection member.

1           44. (new) The deformation process defined in claim 39  
2 wherein said core is made from a thermally conductive material to  
3 take said element to said predetermined temperature.

1           45. (new) The deformation process defined in claim 39  
2 wherein said core has a surface configuration suitable for  
3 realizing a deformation zone with the same configuration only on an  
4 inner surface of said element.

1           46. (new) The deformation process defined in claim 39  
2 wherein said core has a surface configuration suitable for  
3 realizing a deformation zone with the same configuration on inner  
4 and outer surfaces of said element.

1           47. (new) The deformation process defined in claim 36  
2 wherein said zone is coated with a thermoplastic composite  
3 material having arrangement of the fibers perpendicular to those of  
4 said element.

1           48. (new) The deformation process defined in claim 29  
2 wherein said compression means is a shrinking or tensoelastic  
3 product in the form of a sheath, band or cap, to be uniformly

4 associated with the outer surface of said element at a temperature  
5 lower than said predetermined temperature.

1 49. (new) The deformation process of an element  
2 according to claim 29 wherein said compression means is a heat  
3 shrinking product activated at an activation temperature  
4 close to said predetermined temperature at which said element  
5 becomes malleable.

1 50. (new) The coupling process according to claim 29  
2 wherein said composite of co-mixed fiber has one or more layers  
3 that can be applied to a mold.

1 51. (new) The coupling process according to claim 50  
2 wherein at least one insert is present between the layers of said  
3 co-mixed fiber composite.

1 52. (new) The coupling process according to claim 50  
2 wherein layers of said co-mixed fiber composite have different  
3 orientations of the fibers.

1                   53. (new) A deformed element made from thermoplastic  
2 material and having a deformation obtained through the action of a  
3 heat shrinking or tensoelastic product associated with the outer  
4 surface.

1                   54. (new) The use of a heat shrinking or tensoelastic  
2 product associated with the outer surface of a thermoplastic  
3 composite element for its deformation.